procedure, and evaluation of the target cell rosettes microscopically and/or by suitable visualizing or imaging devices, and wherein one antibody is conjugated to one type of particle instrumentally or visually separable by fluorescence, color and size, with sizes of the particles ranging from 0.01μm to 6μm, each antibody of the 2 to 6 antibodies is conjugated to different particles, and the ratio between the number of particles and the number of cells ranges from 0.5 : 1 to 20 : 1 in the cell suspension.

6. (Amended) Method according to claim 7, wherein the particles used in the method are coated with antibodies directed against the receptors/antigens selected from the group consisting of integrins, ICAM-1 (CD54), VCAM-1, NCAM (CD56), HCAM, LCAM, CD44, CD44 variants, ELAM-1, E-selectin, P-selectin, LFA (CD58), MACAN-1, E-cadherin, P-cadherin, tenascin, thrombospondin receptor (CD36), VLA-2, T-antigen, Tn-antigen, sialyl Tn, galbl-4GlcNac (nL4, 6, 8), gastrointestinal cancer antigen, Le^y, di-Le^x, tri Le^x, CA15-3 epitope, CEA, lacto-N-fucopentanose III (CD15), GD_3, GD_2, Gb_3, GM_3, GM_2, $FucGM_1$, EGF receptor, c-erbB-2 (HER2), PDGFα receptor, PDGFβ receptor, transferrin receptor, NGF receptor, IL-2 receptor (CD25), c-kit, TNF receptor, high molecular weight melanoma antigen (HMW 250,000), MW 105 melanoma glycoprotein, MW100 kDa antigen (melanoma/carcinoma), gp 113, p95-100, gp75/TRP-1, gp 100-107, MAA, MW125kD (gp125), MAGE 1, MAGE 2, MAGE 3, tyrosinase, TP-1 epitope, Tp-3 epitope, MW 200kD sarcoma antigen, MW160kD sarcoma antigen, EGP-2 (cluster 2 epithelial antigen), MUC-1 antigens, MUC-2, MUC-3, LUBCRU-G7 epitope (gp 230kD), prostate specific antigen, prostate cancer antigen, prostate high molecular antigen (MW>400kD), polymorphic epithelial mucins, prostate specific membrane antigen (Cyt-356), human milk fat globin, 42kD breast carcinoma epitope, MW > 10^6 mucin, ovarian carcinoma OC125 epitope (MW 750 kD), pancreatic HMW glycoprotein, colon antigen Co-17-1A (MW 37000), Ga 733.2, TAG 72, pancreatic cancer marker, pancarcinoma marker, prostrate adenopcarcinoma-antigen, MW 150-130kD adenocarcinoma marker, MW 92kD bladder carcinoma marker, MW 600kD bladder carcinoma marker, bladder carcinoma antigen, hepatocellular carcinoma antigen, MW 48kD colorectal carcinoma marker, colon specific antigen, lung carcinoma antigen MW 350-420kD, colon cancer marker, bladder carcinoma antigens, neuroblastoma epitope, Mel-14 epitope, HMW 250kD glioma antigen, MW 18-22kD head and neck cancer antigen, HLA Class 1 antigen, HLA-A, HLA-B, HLA-A2, HLA-ABC,

HLA-DR, HLA-DQ, HLA-DP, β2-microglobulin, Fas (CD95/APO-1), FAsL, P75, cathepsin D, neuroglandular antigen (CD63), pan-human cell antigen, motility related antigens, proliferation markers, differentiation markers, drug resistance-related markers, angiogenesis markers, chemokine receptor markers, invasion-related antigens, B-cell CD antigens, and T-cell CD antigens.

7. (Amended) Method according to claim 1, wherein the antigenic determinants/receptors expressed on the target cells are tumor antigens.

8. (Amended) Method according to claim 7, wherein the tumor antigens are MOC31 anti EGP2 (anti-epithelial cell marker) antibody, anti-breast mucin (MUC1) antibody (BM7), 595, anti-EGF receptor (425.3), anti-erbB2 and anti-HMW melanoma antigen (9.2.27).

10. (Amended) Method according to claim 9, wherein the target cell characteristics of biological markers of diagnostic, prognostic and therapeutic value are registered.

12. (Amended) Method according to claim 10, wherein the biological markers are adhesion molecules, growth factor receptors, carcinoma markers, carbohydrate antigens, melanoma antigens, sarcoma antigens, glioma antigens, apoptosis markers, motility related markers, proliferation antigens, differentiation markers, drug resistance markers, angionesis markers chemokine receptors, invasion- related markers and other antigens.

13. (Amended) Method according to claim 10, wherein the biological markers are E-cadherin, EGFr, c-erbB2, IL-2 receptor, TNF receptor , EGP2, MUC1, MUC2 & 3, PSA, PSM, GA733.2, TAG72, 15-3 epitope, ovarian carcinoma CA- 125 epitope, Le^y, CEA, 15-3 epitope, HMW 250000 melanoma antigen, gp 75/TRP-1, p95, MAG 1, MAG 2, MAG 3, TP 1 and TP 3 eptiopes, Mel-14 epitope, Fas, FasL, p75, KAT-1, AMF, gp120, MUC 18, TA99, MDR, MRP, VEGFr, bFGF, CCR, CXCR, uPAR, uPA, PAI-1, TIMP1 & 2, MMP9, stromelysins, and cathepsin D and pan-human epitope.

14. (Amended) Kit to detect and phenotype target cells in cell suspensions by using particles coated with antibodies/ligands directed against antigenic determinants/receptors expressed on the target cells, except when the target cells are malignant and normal haematopoietic and lymphatic cells, wherein 2 to 6 antibodies or ligands each conjugated to a

particle, wherein the particle is a fluorescent or dyed particle, are incubated under gentle rotation for 5-10 minutes to 2 hours with cell suspensions containing the target cells at 0°C to 25°C, followed by an enrichment procedure, and evaluation of the target cell rosettes microscopically and/or by suitable visualizing or imaging devices, wherein the kit comprises particles conjugated to antibodies/ligands, wherein one antibody is conjugated to one type of particle instrumentally or visually separable by fluorescence, color and size, with sizes of the particles ranging from 0.01μm to 6μm, each antibody of the 2 to 6 antibodies is conjugated to the same or different particles, and the ratio between the number of particles and the number of cells ranges from 0, 5 : 1 to 20 : 1 in the cell suspension.